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A STUDY OF AN OUTBREAK OF FOOD POISONING IN A HOSPITAL IN GALVESTON, TEXAS

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An outbreak of food poisoning occurred in a general hospital in Galveston, Texas, on July 6, 1943. The hospital, used to a large extent for training medical and nursing students, was established over 50 years ago, and while the facilities for medical care have been increased markedly from time to time, those for cooking and storage of foods for patients and personnel have been increased but little.

At the time of the outbreak, the afternoon and evening of July 6, the patients in the institution numbered 390 and the personnel 610 (320 white and 290 colored). There appears to have been at least 85 cases of gastro-intestinal irritation among the patients and 250 cases among the personnel.

Study of the outbreak was begun on July 7.

SCOPE OF STUDY

The study comprised:

(1) Obtainment of clinical histories of a number of the cases.

(2) Collection of data regarding the distribution of cases among patients by wards and among personnel by race.

(3) Determination of the kinds of foods and beverages consumed by the patients and the personnel—both the affected and the unaffected—in the period of causation of the outbreak.

(4) Surveys of conditions under which the foods and beverages were prepared, stored, and served to the patients and the personnel during the several days before the beginning of the outbreak.

(5) Submission of samples of foods and beverages regarded as possibly implicated to the laboratories of the Department of Bacteriology, the Department of Pathology, and the Department of Preventive Medicine for bacteriological examination.

Especial attention was given to factors which might have operated in contamination of the foods by human hands, by flies, roaches, mice, and other vermin, and to temperature and moisture maintained in the refrigerators in which the foods were stored.

Questionnaires were used to obtain clinical and epidemiological histories of the personnel. The form was as follows:

JULY 9, 1943.

Name ---------- Race W( ) C( )
Position ----------

Have you had an attack of diarrhea and/or vomiting since noon of Tuesday, July 6? Yes ( ) No ( ).
If so, at what hour on what day did it begin? ----------

At the midday meal on Tuesday, July 6, of which of the following articles of food did you partake:

	Yes	No
Chicken salad	------	------
String beans	------	------
Escalloped potatoes	------	------
Ice cream	------	------
Bread	------	------
Milk	------	------

From the total personnel of 610, questionnaires which had been satisfactorily filled out were obtained from 272 (183 white and 89 colored).

CLINICAL CHARACTER OF CASES

In general, the clinical manifestations of the cases were very similar. The predominating symptoms were nausea, vomiting, abdominal cramps, and purging, but no fever. The duration of the attacks ranged from 2 to 72 hours, but in most cases it was from 4 to 12 hours. Blood was not apparent in either vomitus or stools. The stools usually were liquid and copious and averaged 5 to 10 in number during the attack. The attacks were distressing and in varying degrees exhausting, but none were reported gravely serious.

PERIOD OF OUTBREAK

The earliest cases had onsets between 2 and 3 p. m. on July 6, and the latest from 36 to 48 hours thereafter. Over 80 percent of the cases had onsets between 2 and 8 p. m., July 6.

DISTRIBUTION OF OUTBREAK

The outbreak was confined to patients and personnel who had their meals prepared in and distributed from one common kitchen. Many scores of persons taking their meals outside the hospital, but who before, during, and after the outbreak were in close and frequent

contact with those affected, remained entirely exempt. The rate of recorded incidence, which averaged 21.8 percent among the whole body of patients, was far from uniform among patients in the different wards; but there were cases among patients in every building, on every floor, and in every section for patients in the hospital. The rate of reported incidence in wards here and there was low, and in others similarly separated it was high. In five wards, including two for young children, with the number of patients in wards ranging from 7 to 19 and aggregating 64, only 2 cases were recorded. In six other wards in the same buildings or sections as the low-rate wards, with the number of patients to wards ranging from 9 to 21 and aggregating 92, there were 45 recorded cases. Most of the difference may have been due to varying degrees of completeness of reporting and to difference in food and other habits among the patients. Some of it may have been due to mere chance, as is to be expected in outbreaks among a large number of persons separated by place of domicile into various small groups.

From the returns on the questionnaires used in canvassing the personnel and from other evidence, it appears that the rate of incidence was in general considerably higher among personnel than among patients. According to these returns, the incidence rate was over 50 percent among the white and over 75 percent among the colored personnel. It is probable that those who were attacked showed more interest in filling out and returning the questionnaires than those who were not attacked. Furthermore, some of the difference in rates may have been due to difference in food or other habits or in susceptibility to the disease.

POSSIBLE FACTORS OF CAUSATION

The explosive character, the clinical manifestations, and the distribution of the cases taken together suggested strongly at the outset of the study that the outbreak was caused by food poisoning.

The distribution of the outbreak and the methods of serving drinking water to the different groups affected eliminated water as a factor. The water used for drinking and other purposes was all from the Galveston city public supply.

The distribution of the outbreak and the ways in which ice was served among patients and personnel and was used for cooling drinking water in the hospital cafeterias eliminated ice in drinking water or in any other beverage as a factor. The ice came from a widely marketed supply in Galveston.

The explosiveness and the distribution of the outbreak precluded contagion or personal contact between cases as a factor.

Thus, it quickly became apparent that food must have been the medium of conveyance of the causative agent.

The next step was to determine in what meal or meals the causative agent was spread. Due to temporary absence from the hospital, night duty, or some other reason, a considerable number of the personnel, including 23 among the white personnel who returned the questionnaires, did not partake of the noonday dinner served in the hospital on July 6 but had eaten several meals at the hospital immediately preceding that dinner. None of these persons was attacked. Not a case was reported or found in any person who did not partake of the dinner served in the hospital on July 6. Thus, that dinner was definitely implicated and all preceding meals served in the hospital were definitely eliminated.

The menu of the dinner of July 6 for patients and personnel on regular diet consisted of chicken salad, boiled string beans, escalloped potatoes, strawberry ice cream, bread, and milk. Those on regular diet included a large majority of the patients and all or nearly all of the personnel.

The milk was obtained from a widely marketed pasteurized supply in Galveston and was delivered in well-capped bottles (half pints and quarts) to the hospital.

The ice cream was obtained from a widely marketed pasteurized supply in Galveston and was delivered in individual service paper wrappers to the hospital.

No outbreak of gastro-intestinal irritation coincident with that in the hospital was reported in the city of Galveston.

The escalloped potatoes and the string beans were freshly cooked and were served while still hot.

The chicken salad had the following interesting and somewhat complex history of origin, preparation, and distribution:

The chickens, small 2-year-old hens, were purchased from a chicken grower in a village within a few miles of the hospital. They were killed and picked, and delivered to the hospital on the evening of July 1. Upon delivery, they were piled into a refrigerator as they were with heads and feet on and undrained. On the morning of July 2, they were packed in ice, each layer of hens between two layers of ice, and restored in the refrigerator. On the morning of July 3, the hens were taken out of the refrigerator, and after being drawn and washed and heads and feet removed were returned to the refrigerator. On the afternoon of July 3, one-half of the batch of hens were roasted, and after cooling for an hour or two at kitchen temperature (which was probably over 95° F.) were put in the refrigerator. On the morning of July 4, the roasted chickens were carved, heated up in gravy, and while still warm distributed to the wards and cafeterias. No gastro-intestinal irritation or other ill consequence was noted to have resulted from the consumption of the dinner served on July 4.

The other half of the batch of hens were cooked in large pots on the afternoon of July 5. The cooking consisted of thorough boiling in salted water for 2 to 3 hours, thereby making the meat tender and readily removable from the bones. The boiled hens while still hot were piled up in the refrigerator. Such a mass of hot meat must have caused some rise in the temperature of the refrigerator and the deeper or central parts of the mass of meat must have remained warm for some hours—probably 12 hours or more—after the meat was put in the refrigerator. The air temperature in this refrigerator, under usual conditions of operation, ranges from 42° F. to 55° F. with a relative humidity averaging 85 percent. However, the temperature and humidity of the kitchen air were found so high that the frequent entrance of this air into the refrigerator results in a large precipitation of moisture on the cooling coils, floor, walls, and exposed surfaces of cooled foods in the refrigerator.

Beginning about 6:30 a. m. on July 6, the boiled hens were removed from the refrigerator into the kitchen where the meat was stripped from the bones, mixed with hard boiled eggs and celery (from Galveston market), and the mixture was run through a chopper and grinder. A mayonnaise dressing consisting of oil, whole raw eggs, vinegar, salt, and paprika beaten together in a large electric mixer was then worked thoroughly by hand into the chicken mixture. All of the mayonnaise so used was said to have been freshly made that morning. The dressing was added and mixed into the chicken in two large trays. The preparation of each tray load in the kitchen took 2 or 3 hours. The first tray of salad was put into the refrigerator while the second tray was being completed. The second tray load was distributed immediately upon completion without being put into the refrigerator. The ventilation of the kitchen is inadequate and its air temperature in periods of cooking is at this time of year uncomfortably high. The first tray load of salad went to the "help" cafeteria where part of it was served to about 250 persons, mostly colored, who eat there. The remainder of that tray load was distributed to the wards where it was taken in a number of carts, one to each ward, and from the carts it was placed on individual plates or trays for service to the patients. The second tray load went to the cafeteria for white personnel and was there served on individual plates, cafeteria style. What was left over in the personnel cafeteria was sent to the "help" cafeteria.

Among the personnel, everyone who was attacked in the outbreak gave a history of having eaten some of the chicken salad; no one who had not eaten the salad became ill.

Of the white personnel eating dinner in the personnel cafeteria on July 6, 160 returned questionnaires giving detailed data. Of these 160, the returns indicate that 97 were attacked and 63 were not

attacked. The following table indicates the percentages of the attacked and the unattacked who ate the different foods served in the dinner:

Foods served:	*Percentage of personnel eating different foods*	
	Attacked	*Not attacked*
Chicken salad	100. 0	84. 1
String beans	72. 2	71. 3
Escalloped potatoes	75. 2	76. 2
Ice cream	94. 8	95. 2
Bread	75. 2	76. 2
Milk	86. 5	81. 2

Among the colored personnel returning the questionnaires with sufficient data for tabulation purposes, 74 were attacked and 15 were not attacked. Of the attacked everyone gave a history of having eaten the chicken salad. Of the 15 not attacked 5 gave a history of not having eaten the salad.

Among the patients who were attacked all except two—and these had somewhat atypical cases—were among those who ate chicken salad. One of the exceptional cases was in a Negro woman with diabetes. She was one of nine patients who had sliced chicken instead of chicken salad for dinner on July 6. She did not have ice cream. She had abdominal cramps beginning about 5 hours after dinner and, although she ate a hearty supper a half hour later, she had no nausea nor vomiting. Her attack of diarrhea was comparatively mild and of short duration. The other case was in an elderly white woman who had had a hysterectomy performed 7 days before. She had some abdominal pain, perhaps somewhat more than she had been having since her surgical operation, and a comparatively mild attack of diarrhea beginning about 7 hours after she ate dinner on July 6. Her dinner at that time consisted of chicken soup and ice cream. She was one of 33 patients who had chicken soup but no chicken salad nor sliced chicken at dinner that day and she was the only one in that group who within the next few days had any unusual gastric or intestinal disturbance. It is quite possible that both of these cases were entirely coincidental to and were not connected with the outbreak. The sliced chicken and the chicken used in the soup were obtained from five of the hens which were cooked in a separate pot in a side room from the main kitchen where those for the salad were cooked. These five hens, however, after being cooked, were stored for 12 to 24 hours in the same refrigerator immediately alongside those cooked for use in the salad.

The epidemiological evidence alone definitely established (*a*) the noonday dinner as the meal in which the causative agent of the outbreak was distributed and (*b*) the chicken salad as the sole or almost sole medium of conveyance. The short interval between the eating

of this meal and the beginning of the outbreak was evidence that the outbreak was caused by a preformed toxin instead of bacterial infection such as occurs in outbreaks due to Salmonella organisms.[1] The interval, however, was too long to arouse suspicion of mineral poisoning attended with symptoms of those manifested in the outbreak. Both the epidemiology and the symptomatology eliminated edible poisonous plants and shellfish as the source of the causative agent. Thus all of the epidemiological and clinical evidence pointed convincingly to an enterotoxin such as that produced by *Staphylococcus aureus* as the causative agent.

According to detailed data obtained from 97 of the attacked white personnel, the interval between the eating of the implicated meal and the onset of symptoms was as follows:

Hours:	Number of cases	Hours:	Number of cases
2–3	6	13–14	1
3–4	12	18–19	3
4–5	20	20–21	1
5–6	18	21–22	1
6–7	16	36–48	2
7–8	10	48–72	1
8–9	1		
9–10	4	Total	97
10–11	1		

How the chicken became contaminated was the next question to be answered. It may have been by human hands, by flies, roaches, mice, or other vermin, or through the air—the greatest probability being human hands.

The care and cleanliness of the hands and clothing of most of the food handlers in the kitchen were far from scrupulous. The sanitary and hygienic conditions in the kitchen and refrigerators and in the immediate outside vicinity were not altogether satisfactory. Flies were numerous in the kitchen and from time to time some invaded the refrigerators. Due to shortage of receptacles some of the garbage, broken dishes, and other refuse were piled up on the floor of a small room separated from the kitchen only by a door which was frequently opened. For final disposal most of the garbage was hauled away by a private contractor but some of it, along with tin cans and other refuse, was dumped in a heap on the surface of the ground in an area with standing water less than 200 feet back of the kitchen. Flies were breeding abundantly in this refuse dump and the dump almost certainly was visited frequently by various insects besides flies and by mice, rats, and other vermin.

[1] G. M. Dack: Food Poisoning. The University of Chicago Press, Chicago, 1943. Pp. 71 to 75 and 100 to 105.

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The chief cook and his two women assistants were the main handlers of the chicken which went into the salad. They handled the boiled chickens after the cooking on July 5. They stripped the meat from the bones and by hand mixed and thoroughly worked the mayonnaise dressing into the ground chicken on the morning of July 6. Staphylococci of the food poisoning variety would not withstand the heating which must have occurred in the course of the 2 or 3 hours of boiling on July 5. Therefore the contamination of the chicken must have taken place after the chicken was cooked on July 5. Multiplication of and enterotoxin production by such organisms in such a medium could have gone on rapidly and abundantly for hours in the deeper parts of the mass of hot to warm meat after it was placed in the refrigerator on July 5 and during the processing of the meat into salad on July 6. The chief cook was a possible source of the infection which was introduced into the chicken. He had had an attack of diarrhea which began June 30 and continued through July 3. He had remained home during his illness and had returned to duty in the hospital kitchen in the early morning of July 4. He did most of the carving of the roasted chicken which was served at dinner on July 4. He may or may not have contaminated the chicken served that day. No trouble would have resulted if he had done so because the roasted chicken, immediately after being carved, was put into pans of gravy, heated, and served hot or warm immediately afterwards. Therefore there was not time for any considerable multiplication of organisms such as enterotoxin producing staphylococci to take place in the chicken between carving and serving. It is evident that this food handler cannot be definitely eliminated as a possible source of the contamination of the chicken handled by him on July 5 and 6.

The service demand upon the hospital kitchen is exceedingly heavy. In this one kitchen about 3,000 meals a day are prepared. The space is inadequate, much of the equipment is outworn, and the personnel problem due to turn-over and at times shortage of force is serious.

LABORATORY FINDINGS

The findings in three separate laboratories of the University of Texas Medical Branch from the bacteriological examination of samples of the different articles of food served in the implicated meal were entirely consistent. They included: (1) Presence of *Staphylococcus aureus*, appearing from the study so far made to be of the enterotoxin producing type,[2] in predominant number and of the colon bacillus (*Escherichia coli*) in large number in the chicken salad; (2) absence of Salmonella organisms from the chicken salad;

[2] Coagulase positive. It liquefies gelatin when tested with the technique of R. V. Stone (Proc. Soc. Exper. Biol. and Med., 33:185-87, 1935).

and (3) absence of the staphylococci and also of Salmonella organisms and colon bacilli (*Escherichia coli*) from the milk, ice cream, potatoes, and beans, and from salad dressings made similarly to the dressing which had been used in the chicken salad.

A specimen of feces obtained from the chief cook in the hospital kitchen 4 days after the development of the outbreak on July 6, and specimens of feces obtained on July 7 from two patients who still had some diarrhea remaining at the time, were examined in the laboratory of the Department of Bacteriology and found negative for *Staphylococcus aureus* and Salmonella.

A highly significant finding in each of the three laboratories was the presence in the specimens of the chicken salad of *Staphylococcus aureus* in large numbers and the absence of other kinds of organisms found in food poisoning. This finding is in entire accord with the epidemiological evidence.

Of especial significance was the finding of *Staphylococcus aureus* in large numbers in the specimen of chicken bones sent to one of the laboratories. These bones had been stripped of chicken which went into the salad. Immediately after the meat had been stripped from them, the bones had been removed from the kitchen and stored in the refrigerator. The abundance of the staphylococci in the bones definitely implicates the chicken and eliminates the mayonnaise dressing, the celery, the eggs, and all of the other ingredients of the chicken salad except the meat as the medium of conveyance of the causative agent of the outbreak.

The negative results of the bacteriological examinations of foods other than the chicken salad served in the dinner of July 6 are in accord with the epidemiological evidence.

The negative result of the bacteriological examination of the specimen of feces which was obtained from the chief cook on July 10 is of no epidemiological significance because his intestinal tract may have become free from the implicated staphylococcus in the interval between July 6 and July 10.

The negative results of the bacteriological examination of the specimens of feces obtained from two of the patients during their attacks of diarrhea suggest to a slight degree at least that persons ingesting the living staphylococci along with their preformed enterotoxin in sufficient quantity to cause purging harbor the living organisms in their gastro-intestinal tracts for only a short time. This is fortunate, if true.

The finding of numerous colon bacilli (*Escherichia coli*) in each of the samples of chicken salad examined indicates fecal contamination. Either the contamination was heavy or a multiplication of the organisms occurred after the contamination. The contaminating

matter carrying the *B. coli* may have carried at the same time or times the staphylococci involved in the outbreak.

SUMMARY

In an outbreak of food poisoning in a large general hospital with 390 patients and 610 personnel having meals regularly in the hospital about 22 percent of the patients and over 50 percent of the personnel were attacked.

The clinical manifestations of the cases in general were very similar, with nausea, vomiting, abdominal cramps, and purging predominant.

The outbreak was widely distributed among the patients and personnel but was confined to those who ate chicken prepared in one common kitchen and served on July 6, 1943, in the noonday meal.

The hygienic and sanitary conditions under which the foods in the implicated meal were prepared, stored, and distributed were found to be largely unsatisfactory.

The epidemiological evidence obtained during the study made of the outbreak was conclusive and was supported altogether by the findings from bacteriological examinations in three separate laboratories of samples of the different foods served in the implicated dinner.

CONCLUSIONS

The medium of conveyance of the agent causing the outbreak was chicken served at the noon dinner on July 6, 1943.

Chicken salad was the sole, or certainly the almost sole, medium of conveyance.

The causative agent was a bacterial toxin produced by *Staphylococcus aureus* of the specifically enterotoxin forming type.

The introduction of *Staphylococcus aureus* on or into the chicken may have been by human hands, dropping perspiration, floating droplets from the nose or throat of some one or more of the food handlers in the kitchen, by flies, roaches, mice, or other vermin, or through air currents. Most probably it was introduced by human hands.

The chicken became contaminated with the staphylococci during the process of handling and exposure of the meat in the kitchen or during storage in the refrigerator subsequent to cooking on July 5. The much greater probability is that contamination occurred during handling in the kitchen.

There was a tremendous multiplication of the infecting organisms in the meat during storage in the refrigerator from the afternoon of July 5 to the morning of July 6 and during the several hours that the meat was being made up into salad in the high temperature of the kitchen on the morning of July 6.

The laboratory finding of the staphylococci in the bones from which the meat for the salad was removed eliminates the mayonnaise dressing, the eggs, and the celery used in the salad as being together or separately an important factor in the causation of the outbreak.

The temperature of the refrigerator room in which the large mass of hot chicken was placed for storage on July 5 is not, with the present inadequate equipment and the mode of operation of the refrigerator, maintained at a sufficiently low degree even under usual circumstances.

HARBORAGE OF *RATTUS RATTUS ALEXANDRINUS*[1]

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It is frequently stated and generally believed that *Rattus rattus alexandrinus*, the common roof or gray rat, inhabits upper parts of buildings and rarely if ever burrows in the ground. *Rattus rattus rattus*, the black or ship rat, is probably only a color variant of *R. r. alexandrinus* (*1*) and specimens intergrade (*2*). There is no reason to believe that habits of black and gray rats differ materially. The burrowing habits of *Rattus norvegicus*, the common brown or sewer rat, are well known.

Lantz (*3*) reported as follows: "In buildings, the brown rat keeps mainly to the cellar and lower parts, where it commonly lives in burrows * * *. The roof rat and the black rat live in the walls or in the space between ceilings and roofs." In the 1927 edition of Preventive Medicine and Hygiene, Rosenau (*4*) reported that "the brown rat differs somewhat in habits from the black rat, especially in that it burrows, which protects it against its enemies and renders its suppression more difficult." An article in Public Health Reports in 1928 (*5*) stated: "The roof rat (*Rattus alexandrinus*) and the black or 'ship' rat (*Rattus rattus*) look for double walls and dusty attics wherein they find protection from their arch enemy, the more ferocious but less agile brown or 'sewer' rat." Creel and Akin (*6*) wrote: "The black rat ordinarily does not burrow, but lives in hollow walls, garrets, or loose material such as empty boxes, barrels, or any rubbish, and within buildings frequents the upper stories and roof, away from its enemy, the brown rat." This sentence is repeated verbatim by Holsendorf (*7*) and in slightly altered form by Dunham (*8*). According to Hinton (*9*), "*R. rattus* is essentially an arboreal or climbing animal, and it rarely burrows: hence, where infesting buildings or huts, it is found usually in the walls, ceilings, or roof, not in cellars or drains." Ehlers and Steel (*10*) said that black and roof rats "tend to nest in trees." The British Ministry of Agriculture and Fisheries (*11*) reported that the brown rat "is a better burrower than the black rat."

[1] From the States Relations Division.

The writer knows of only five published reports that definitely describe underground activity of the *R. rattus* group. Eskey (*12*) reported in 1932 that over a hundred *R. r. alexandrinus* and *R. r. rattus* had been caught in the sewers of Lima, Peru, although over 99 percent of rats caught in these sewers were *R. norvegicus*. In 1934 the same author in his discussion of plague in the Hawaiian Islands (*13*) reported as follows: "In central Maui, where there were no *R. norvegicus*, the *R. rattus* group were encountered in great numbers under buildings. In one instance over a hundred were dug out of manure boxes in a chicken house, while in another, three *R. alexandrinus* were excavated from underground burrows in the center of a chicken yard. The *R. rattus* group, both black and gray species, were so frequently encountered under floors of buildings in central Maui that it seemed they preferred such places for their nests." On the basis of Eskey's observations, Rosenau (*14*) reported in 1935 as follows: "*Rattus rattus rattus* and *alexandrinus* when present in conjunction with the more vicious and larger *Rattus norvegicus* usually nest in the upper parts of buildings but in localities where the larger species are few or absent they will be found in large numbers in nesting places under buildings and in burrows or the same harborage places generally preferred by *Rattus norvegicus*." In 1936 Dopmeyer (*15*) reported that on the Island of Maui "as many as 13 rats were found in one tunnel system, and all 3 species were found, the native *hawaiiensis* far outnumbering the other 2 species. In a few cases all 3 species were found in the same tunnel, but in these cases the rats may have sought temporary shelter after natural living conditions had been disturbed." Perolio (*16*) in 1943 reported that in Alabama black and gray rats usually nest in upper parts of buildings but that they have been trapped on lower floors and even underground, although this only occurs when Norway rats are few or absent in the locality.

In the course of endemic typhus control activities in southeastern States during recent years several instances of extensive burrowing by *R. r. alexandrinus* have been observed in basements and under floors that were close to the ground. One striking example was a grocery store in Woodruff, S. C., which was fumigated with hydrocyanic acid gas in March 1942 and again in September 1942. On both occasions only gray rats were recovered: 44 in March and 237 in September. At the latter fumigation 15 rats were found in a burrow alongside an old sewer pipe. This burrow passed under the foundation of the building 18 inches below the level of the ground under the building (36 inches below outside ground level). It provided easy passage for rats into and out of the building and was obviously an active thoroughfare. In this and other buildings in which gray rats were known to burrow, *R. norvegicus* was not found. *R. r. alexandrinus* and *R. norveg-*

icus often coinhabit buildings, but in such circumstances only the latter has been encountered in burrows.

Sometimes rodent infestation of a building or entire city block is limited to mice, gray rats, and black rats although adjacent buildings or blocks harbor also Norway rats. In Adel, Ga., extensive trapping in the business district for over a month in the summer of 1940 yielded only mice and gray rats in spite of the fact that neighboring communities harbored all three of the common types of rats. In Adel, *R. alexandrinus* also burrowed extensively under chicken coops and under floors.

CONCLUSION

Contrary to the general belief that *R. r. alexandrinus* inhabits only upper parts of buildings, the observations presented show that this species sometimes burrows in the ground and may be encountered under buildings and in basements and sewers. Most descriptions overemphasize the differences in harboring habits of the common species of rats.

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AMERICAN Q FEVER: THE OCCURRENCE OF *RICKETTSIA DIAPORICA* IN *AMBLYOMMA AMERICANUM* IN EASTERN TEXAS[1]

By R. R. PARKER, *Director, Rocky Mountain Laboratory,* and GLEN M. KOHLS, *Associate Entomologist, United States Public Health Service*

The presence of *Rickettsia diaporica*, the causative agent of American Q fever, was demonstrated in 1937 in 10 of 92 lots of nymphal and adult *Amblyomma americanum* collected during July and August in Liberty County, eastern Texas. These ticks were tested primarily for the possible presence of the rickettsia of Rocky Mountain spotted fever, a case of which had recently occurred in the general area where the collections were made. The results of the test with respect to this disease agent were not definite. The recovery of *R. diaporica* was entirely unexpected.

The collection, locality, and host date for the 10 lots positive for *R. diaporica* are given in the following table:

Number of ticks		Source of ticks		Date collected	Locality of collection (Texas)
Adults	Nymphs	Host	Ground or vegetation		
22		Goat		July 15	Plum grove.
4			+	July 16	Along east San Jacinto River.
	23	Goat		July 22	Plum grove.
27		Cow		July 23	Do.
19	10	Cow		Aug. 4	Do.
	9		+	Aug. 8	Cleveland.
	100		+	Aug. 9	Do.
	17		+	Aug. 13	Do.
	80		+	Aug. 14	Do.
5	32	Dogs		Aug. 14	Do.

Passage strains initiated from guinea pigs used to test the ticks of the positive lots were maintained through sufficient transfers to permit the identification of the rickettsia. The manifestations of disease were similar to those characteristic of the original strain recovered from *Dermacentor andersoni* in Montana. All animals were febrile. In those that died and in those sacrificed the spleen was enlarged up to six times the original size and was generally smooth. The inguinal nodes and often the mesenteric nodes were enlarged and sometimes slightly injected. Pneumonitis was present in some animals. Some of those that recovered were tested for immunity to American Q fever and were found immune. Some were tested for immunity to Rocky Mountain spotted fever and were found to be susceptible. Blood serum passed through Berkefeld filters was infectious. One strain was fatal to approximately 50 percent of the test animals.

[1] Contribution from the Rocky Mountain Laboratory of the Division of Infectious Diseases, National Institute of Health.

No attempt was made to demonstrate rickettsiae in the animal tissues, but a strain established in eggs exhibited the characteristics of *R. diaporica*.

Acknowledgement is due to George W. Cox, State health officer of Texas, who kindly provided assistance for collecting ticks and also to T. MacGregor of the Texas State Board of Health Laboratory.

PUBLIC HEALTH SERVICE PUBLICATIONS

A List of Publications Issued During the Period January–June 1943

The following is a list of publications of the United States Public Health Service issued during the period January–June 1943.

The purpose of the publication of this list is to provide a complete and continuing record of Public Health Service publications for reference use by librarians, scientific workers, and others interested in particular fields of public health work, and not to offer the publications for indiscriminate free public distribution.

Those publications marked with an asterisk (*) may be obtained only by purchase from the Superintendent of Documents, Government Printing Office, Washington, D. C., at the prices noted.

Periodicals

*Public Health Reports (weekly), January–June, vol. 58, Nos. 1 to 26, pages 1 to 1000. 5 cents a number.

*Venereal Disease Information (monthly), January–June, vol. 24, Nos. 1 to 6, pages 1 to 184. 5 cents a number.

*Journal of the National Cancer Institute (bimonthly), December–June, vol. 3, Nos. 3 to 5, pages 227 to 581. 40 cents a number.

Reprints From the Public Health Reports

2438. Coccidioidomycosis in wild rodents. A method of determining the extent of endemic areas. By C. W. Emmons. January 1, 1943. 5 pages.

2439. Distribution of health services in the structure of State government. Chapter VIII. Industrial health activities by State agencies. By Joseph W. Mountin and Evelyn Flook. January 8, 1943. 26 pages.

2440. Public Health Service Drinking Water Standards and manual of recommended water sanitation practice. Standards adopted by the Public Health Service September 25, 1942, for drinking and culinary water supplied by common carriers in interstate commerce. January 15, 1943. 43 pages.

2441. A nation-wide study of the bacterial etiology of the pneumonias. By A. S. Rumreich, H. J. Shaughnessy, J. V. Mulcahy, J. C. Willett, W. H. Kellogg, and Wm. C. Mitchell. January 22, 1943. 14 pages.

2442. Growth measurements of *Anopheles quadrimaculatus* larvae. By Frederick L. Knowles. January 22, 1943. 4 pages.

2443. Mouse protective values of antimeningococcus serum in comparison with precipitation in immune serum agar plates. By Margaret Pittman. January 22, 1943. 4 pages.

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2444. Sanitation manual for land and air conveyances operating in interstate traffic. January 29, 1943. 34 pages.
2445. The identification and localization of lead in bone tissue. By Lawrence T. Fairhall. February 5, 1943. 8 pages; 2 plates.
2446. The microclimate of diurnal resting places of *Anopheles quadrimaculatus* Say in the vicinity of Reelfoot Lake. By Don E. Eyles and Lindsay K. Bishop. February 5, 1943. 14 pages.
2447. Rocky Mountain spotted fever: duration of potency of tick-tissue vaccine. By R. R. Parker and Edward A. Steinhaus. February 5, 1943. 2 pages.
2448. List of State and insular health officers (as of January 15, 1943). February 5, 1943. 3 pages.
2449. Distribution of health services in the structure of State government. Chapter IX. Central State services affecting all branches of public health work. By Joseph W. Mountin and Evelyn Flook. February 12, 1943. 30 pages.
2450. A self-help solution of State personnel problems. By Joseph W. Mountin. February 19, 1943. 8 pages.
2451. An outbreak of *Microsporon lanosum* infection from a kitten. By Isadore Botvinick, Samuel M. Peck, and Louis Schwartz. February 19, 1943. 3 pages.
2452. Report on market-milk supplies of Public Health Service milk ordinance communities, January 1, 1941 to December 31, 1942. February 19, 1943. 5 pages.
2453. A practical plan for the treatment of superficial fungus infections. By Samuel M. Peck and Louis Schwartz. February 26, 1943. 9 pages.
2454. Status of full-time local health organization at the end of the fiscal year 1941–1942. By F. W. Kratz. February 26, 1943. 7 pages. 5 cents.
*2455. Experimental Rocky Mountain spotted fever: results of treatment with certain drugs. By Edward A. Steinhaus and R. R. Parker. February 26, 1943. 2 pages.
2456. *Triatoma sanguisuga* (LeConte) and *Triatoma ambigua* Neiva as natural carriers of *Trypanosoma cruzi* in Texas. By Dorland J. Davis, Theodore McGregor, and Thelma deShazo. February 26, 1943. 2 pages.
2457. Coliform confirmation from raw and chlorinated waters with brilliant green bile lactose broth. By Elsie Wattie. March 5, 1943. 7 pages.
2458. Parental and familial factors in the acceptance of diphtheria and smallpox immunization. By Lester Breslow, Pearl R. Shalit, and Gaylord W. Anderson. March 5, 1943. 13 pages.
2459. Experiments in the cooking of garbage for the destruction of trichinae in pork scraps. By Willard H. Wright and John Bozicevich. March 5, 1943. 9 pages.
2460. Rickettsia-like organism from normal *Dermacentor andersoni* Stiles. By Edward A. Steinhaus. September 11, 1942. 3 pages.
2461. Rural sewage disposal. Recommendations of Joint Committee on Rural Sanitation. March 12, 1943. 32 pages.
2462. A Giemsa stain of quite constant composition and performance made in the laboratory from eosin and methylene blue. By R. D. Lillie. March 12, 1943. 4 pages.
2463. What's past is prologue. Academic qualifications of registered nurses as revealed by the 1941 National Survey of Registered Nurses. By Henrietta Landau. March 19, 1943. 13 pages.
2464. A comparison of rabbit and horse serums in meningococcus infections. By Sara E. Branham. March 19, 1943. 6 pages.

2465. Location and movement of physicians, 1923 and 1938. Age distribution in relation to county characteristics. By Joseph W. Mountin, Elliott H. Pennell, and Virginia Nicolay. March 19, 1943. 8 pages.

2466. Aqueous-base yellow fever vaccine. By M. V. Hargett, H. W. Burruss, and Anthony Donovan. March 26, 1943. 8 pages.

2467. Experimental chemotherapy of burns and shock. III. Effects of systemic therapy on early mortality. By Sanford M. Rosenthal. March 26, 1943. 10 pages.

2468. Distribution of health services in the structure of State government. Chapter X. State health department organization. By Joseph W. Mountin and Evelyn Flook. April 2, 1943. 36 pages.

2469. Notes on the relation between coliforms and enteric pathogens. By Robert W. Kehr and Chester T. Butterfield. April 9, 1943. 19 pages.

2470. The toxicity of lead azide. By Lawrence T. Fairhall, Wendell V. Jenrette, Stuart W. Jones, and E. A. Pritchard. April 9, 1943. 10 pages.

2471. American and Australian Q fevers: persistence of the infectious agents in guinea pig tissues after defervescence. By R. R. Parker and Edward A. Steinhaus. March 26, 1943. 5 pages.

2472. An outbreak of dermatitis from airplane engine covers. By Louis Schwartz and Samuel M. Peck. April 16, 1943. 7 pages; 2 plates.

2473. Murine typhus fever control. Typhus Fever Control Unit of the United States Public Health Service. By C. R. Eskey. April 16, 1943. 9 pages.

2474. Studies of the acute diarrheal diseases. X A. Cultural observations on the relative efficacy of sulfonamides in *Shigella dysenteriae* infections. By Albert V. Hardy, William Burns, and Thelma DeCapito. X B. A preliminary note on the clinical response to sulfadiazine therapy. By Albert V. Hardy and Sam D. Cummins. XI. The typing of *Shigella dysenteriae* Flexner. By Albert V. Hardy, James Watt, and Thelma DeCapito. April 30, 1943. 12 pages.

2475. Rocky Mountain spotted fever: spontaneous infection in the tick *Amblyomma americanum*. By R. R. Parker, Glen M. Kohls, and Edward A. Steinhaus. May 7, 1943. 9 pages.

2476. Rocky Mountain spotted fever. Further experience in the therapeutic use of immune rabbit serum. By Norman H. Topping. May 14, 1943. 19 pages.

2477. An improved antigen for complement fixation in American trypanosomiasis. By Dorland J. Davis. May 14, 1943. 4 pages.

2478. A plan for rodent control in cities. By G. C. Sherrard. May 28, 1943. 8 pages.

2479. The bacteriostatic action of sulfadiazine on *E. typhosa* in carriers and cases. By Albert V. Hardy. May 28, 1943. 8 pages.

2480. Relapsing fever: the tick *Ornithodoros turicata* as a spirochetal reservoir. By Gordon E. Davis. May 28, 1943. 4 pages.

2481. Tularaemia: spontaneous occurrence in shrews. By Glen M. Kohls and Edward A. Steinhaus. May 28, 1943. 1 page.

2482. A blueprint for the conquest of hunger. By Thomas Parran. June 11, 1943. 8 pages.

2483. Dermatitis from resin glue in war industries. By Louis Schwartz, Samuel M. Peck, and John E. Dunn. June 11, 1943. 5 pages.

2484. Activities of State and local industrial hygiene services in a war year. By Victoria M. Trasko. June 11, 1943. 12 pages.

2485. The effect of arsenates on the storage of lead. By Lawrence T. Fairhall, John W. Miller, and F. Lloyd Weaver. June 18, 1943. 5 pages.

2486. Poliomyelitis in the United States in 1942, and a summary of its prevalence from 1933 to 1942, inclusive. By C. C. Dauer. June 18, 1943. 13 pages.
2487. Studies on the duration of disabling sickness. IV. Duration of disability from the nonrespiratory-nondigestive diseases among male employees with particular reference to the older worker. By William M. Gafafer and Rosedith Sitgreaves. June 25, 1943. 12 pages.
2488. The health officer's place in the management of mental illness. By Samuel W. Hamilton. June 25, 1943. 5 pages.
2489. American Q fever: experimental transmission by the Argasid ticks *Ornithodoros moubata* and *O. hermsi*. By Gordon E. Davis. June 25, 1943. 4 pages.

Supplements to the Public Health Reports

161. Ivy and sumac poisoning. Revised 1943. 8 pages; 2 plates.
*165. The pharmacology of the opium alkaloids. By Hugo Krueger, Nathan B. Eddy, and Margaret Sumwalt. Published in two volumes, cloth bound. Part 1, 1941, pages 1 to 811; part 2, 1943, pages 813 to 1448. $1.50 each part.
169. Deficiency stomatitis. By Harold R. Sandstead. 1943. 7 pages; 2 plates.
170. Follow-up study of treated narcotic drug addicts. By Michael J. Pescor. 1943. 18 pages.
171. Outline of an industrial hygiene program. 1943. 13 pages.
172. The notifiable diseases. Prevalence during 1941 in States. 1943. 13 pages.

Public Health Bulletin

184. Distribution of health services in the structure of State government. By Joseph W. Mountin and Evelyn Flook. Third edition, 1943. 332 pages.

National Institute of Health Bulletins

181. The toxicology of beryllium. By Frances Hyslop, Edward D. Palmes, William C. Alford, A. Ralph Monaco, and Lawrence T. Fairhall. 1943. 56 pages; 5 halftones.
182. Industrial manganese poisoning. By Lawrence T. Fairhall and Paul A. Neal. 1943. 24 pages.

Workers' Health Series

10. What You Don't Know *Can* Hurt You. 7 pages.

Workers' Health Posters

10. Jenny on the Job. Wears styles designed for victory.
11. Jenny on the Job. Eats man size meals.
12. Jenny on the Job. Gets her beauty sleep.
13. Jenny on the Job. Keeps fresh as a daisy.
14. Jenny on the Job. Has her fun after work.
15. Jenny on the Job. Steps ahead with low heels.
16. Jenny on the Job. Lifts weight the easy way.
17. Jenny on the Job. Let's keep our rest room clean.

Community Health Series

4. Malaria quiz for young Americans. 1943. 32 pages, illustrated.

Tuberculosis Folder

1. You're going to have your picture taken. 1943. 4 pages.

Unnumbered Publications

Index to Public Health Reports, volume 57, part 2, July–December 1942. 18 pages.

Index to Journal of the National Cancer Institute, volume 3, August 1942–June 1943. 10 pages.

Insert to Reprint No. 1697 "Control of Communicable Diseases," pages 56A and 56B. 1943.

National Negro Health Week Bulletin. This pamphlet is published annually, usually about the middle of March, for community leaders in an effort to suggest ways and means by which interested individuals and organizations may be organized for a concerted and effective attack upon the community's disease problems. Twenty-ninth observance, April 4–11, 1943. 4 pages.

National Negro Health Week leaflet. Twenty-ninth observance, April 4–11, 1943. 2 pages.

National Negro Health Week poster. Twenty-ninth observance, April 4–11, 1943.

Reprints from Venereal Disease Information

190. Symptomatic neurosyphilis. By Robert R. Kierland, Paul A. O'Leary, and Eleanor Vandoren. Vol. 23, October 1942. 18 pages.
191. Law enforcement in venereal disease control from the standpoint of the health officer. By John H. Stokes. Vol. 23, November 1942. 10 pages.
192. Quantitative serologic studies in early syphilis. I. Treatment with artificial fever alone. By Walter M. Simpson, Donald L. Rose, and H. Worley Kendell. II. Treatment with artificial fever combined with chemotherapy. By H. Worley Kendell, Donald L. Rose, and Walter M. Simpson. III. Treatment with a single intensive session of combined fever-chemotherapy. By Donald L. Rose, Walter M. Simpson, and H. Worley Kendell. Vol. 23, November 1942. 13 pages.
193. A comparison of case-finding methods in a syphilis control program. By Henry Packer. Vol. 23, December 1942. 8 pages.
194. Preliminary report on the treatment of postarsenical dermatitis with histamine. By Edward C. Jenkins. Vol. 24, January 1943. 3 pages.
195. A comparative study of antigens of human pus, mouse brain, and chick embryo origin for the diagnosis of lymphogranuloma venereum. By Franco Mortara and Robert B. Greenblatt. Vol. 24, January 1943. 4 pages.
196. An experimental evaluation of intensive methods for the treatment of early syphilis. I. Toxicity and excretion. By Harry Eagle and Ralph B. Hogan. Vol. 24, February 1943. 12 pages.
197. An experimental evaluation of intensive methods for the treatment of early syphilis. II. Therapeutic efficacy and margin of safety. By Harry Eagle and Ralph B. Hogan. Vol. 24, March 1943. 11 pages.
198. The importance of diagnosis of gonorrhea in the woman in the control of this disease. By Adolph Jacoby. Vol. 24, March 1943. 4 pages.
199. Requirements of premarital legislation as they apply to the laboratories and commissioned medical officers of the armed services and of the United States Public Health Service. By J. F. Mahoney. Vol. 24, April 1943. 3 pages.

Venereal Disease Special Education Circular

4. Victory versus Vd. (revised edition). 20 pages.

Supplements to Venereal Disease Information

4. Directory of clinics for the diagnosis and treatment of venereal diseases. Revised 1943. 1943. 124 pages.

4–A. Directory of venereal disease clinics for foreign seamen. 1943. 18 pages.

DEATHS DURING WEEK ENDED SEPTEMBER 25, 1943

[From the Weekly Mortality Index, issued by the Bureau of the Census, Department of Commerce]

	Week ended Sept. 25, 1943	Corresponding week, 1942
Data for 90 large cities of the United States:		
Total deaths	8,300	7,727
Average for 3 prior years	7,563	
Total deaths, first 38 weeks of year	347,280	318,842
Deaths under 1 year of age	625	509
Average for 3 prior years	544	
Deaths under 1 year of age, first 38 weeks of year	24,881	21,717
Data from industrial insurance companies:		
Policies in force	65,848,572	65,043,991
Number of death claims	12,974	10,068
Death claims per 1,000 policies in force, annual rate	10.3	8.1
Death claims per 1,000 policies, first 38 weeks of year, annual rate	9.8	9.2

PREVALENCE OF DISEASE

No health department, State or local, can effectively prevent or control disease without knowledge of when, where, and under what conditions cases are occurring

UNITED STATES

REPORTS FROM STATES FOR WEEK ENDED OCTOBER 2, 1943

Summary

The incidence of poliomyelitis declined sharply for the second week. A total of 679 cases was reported, as compared with 818 for the preceding week, 1,020 for the next earlier week, and a 5-year (1938–42) median of 469. States reporting 18 or more cases (last week's figures in parentheses) are as follows: *Increases*—Massachusetts 31 (29), Connecticut 32 (29), Missouri 22 (10), Oklahoma 22 (18), and Oregon 29 (18); *decreases*—Rhode Island 18 (20), New York 52 (57), Illinois 118 (140), Wisconsin 19 (22), Kansas 32 (52), Texas 26 (41), Utah 18 (42), Washington 19 (22), and California 98 (117). The cumulative total for the first 39 weeks of the year is 9,309, as compared with 2,835 for the same period last year and a 5-year (1938–42) median of 4,899 for the corresponding period.

A total of 192 cases of meningococcus meningitis was reported, the largest weekly total of the past 7 weeks, as compared with 178 for the preceding week, 48 for the corresponding week last year, and a 5-year median of 27. The largest comparable weekly figure during the past 16 years was that of 111 cases for the corresponding week of 1929. States reporting 10 or more cases for the current week (last week's figures in parentheses) are as follows: Massachusetts 10 (16), New York 31 (17), Pennsylvania 12 (15), Ohio 12 (5), Illinois 13 (19), and California 22 (14). The cumulative total for the first 39 weeks of the year is 14,523, as compared with 2,671 for the same period last year, a 5-year median of 1,602, and 8,177 for the same period in 1929, the largest comparable number of the past 16 years.

Of the other seven common communicable diseases included in the following table, seasonal increases were reported for diphtheria, influenza, measles, and scarlet fever. The current incidence is above the corresponding median for influenza, measles, and scarlet fever, but only for measles and whooping cough for the first 39 weeks of the year.

Deaths recorded for the week in 88 large cities of the United States aggregated 8,340, as compared with 8,258 last week and a 3-year (1940–42) average of 7,906. The cumulative total for the first 39 weeks of the year is 353,227, as compared with 324,730 for the same period last year.

Telegraphic morbidity reports from State health officers for the week ended October 2, 1943, and comparison with corresponding week of 1942 and 5-year median

In these tables a zero indicates a definite report, while leaders imply that, although none were reported cases may have occurred.

Division and State	Diphtheria			Influenza			Measles			Meningitis, meningococcus		
	Week ended—		Median 1938–42	Week ended—		Median 1938–42	Week ended—		Median 1938–42	Week ended—		Median 1938–42
	Oct. 2, 1943	Oct. 3, 1942		Oct. 2, 1943	Oct. 3, 1942		Oct. 2, 1943	Oct. 3, 1942		Oct. 2, 1943	Oct. 3, 1942	
NEW ENGLAND												
Maine	0	0	1	----	----	1	19	0	1	1	1	1
New Hampshire	0	0	0	1	----	----	1	0	0	1	0	0
Vermont	0	0	0	----	----	----	4	17	3	0	0	0
Massachusetts	9	3	3	----	----	----	66	40	52	10	3	1
Rhode Island	0	4	1	----	----	----	7	4	1	3	0	0
Connecticut	2	8	2	2	1	1	8	2	4	2	1	1
MIDDLE ATLANTIC												
New York	12	9	10	[1]4	[1]6	[1]6	114	42	48	31	5	4
New Jersey	4	1	3	2	5	5	60	25	25	8	3	1
Pennsylvania	18	6	12	1	----	----	34	51	51	12	4	2
EAST NORTH CENTRAL												
Ohio	11	6	8	4	5	5	45	22	22	12	0	0
Indiana	28	4	9	2	14	11	4	7	4	8	0	0
Illinois	7	11	11	2	6	6	45	13	18	13	0	0
Michigan [2]	2	5	5	----	3	3	251	21	38	6	0	1
Wisconsin	2	1	0	0	34	33	99	48	48	4	0	0
WEST NORTH CENTRAL												
Minnesota	7	1	2	3	1	2	70	1	6	5	0	0
Iowa	10	7	7	----	----	----	2	12	6	0	0	0
Missouri	19	3	4	1	----	----	9	3	3	6	1	0
North Dakota	1	0	3	10	3	3	186	4	4	2	0	0
South Dakota	6	0	1	----	----	----	4	0	1	0	0	0
Nebraska	3	5	4	----	3	----	4	22	4	0	1	0
Kansas	4	2	4	5	9	2	7	5	6	3	0	0
SOUTH ATLANTIC												
Delaware	0	1	1	----	----	----	6	0	1	2	0	0
Maryland [2]	3	5	4	5	2	2	7	8	7	5	5	2
District of Columbia	0	1	1	----	----	----	1	0	2	2	0	0
Virginia	16	20	20	53	111	41	27	7	7	3	4	3
West Virginia	10	8	8	----	3	7	13	2	2	1	2	1
North Carolina	38	76	76	7	----	2	9	5	11	1	0	0
South Carolina	25	31	41	141	171	171	15	2	2	1	3	1
Georgia	29	25	37	41	28	20	5	3	10	0	0	0
Florida	5	7	7	4	----	4	1	2	2	4	0	1
EAST SOUTH CENTRAL												
Kentucky	15	12	14	3	2	2	2	0	12	4	0	0
Tennessee	23	24	24	7	19	19	2	6	5	1	0	0
Alabama	29	18	39	35	19	7	11	1	7	0	0	0
Mississippi [3]	7	10	11	----	----	----	----	----	----	0	0	0
WEST SOUTH CENTRAL												
Arkansas [3]	5	17	17	9	29	23	1	3	3	0	0	0
Louisiana	5	6	6	1	5	5	1	2	2	2	0	1
Oklahoma	5	9	9	11	10	12	4	1	1	1	1	0
Texas	32	49	34	456	379	108	17	4	13	0	1	2
MOUNTAIN												
Montana	0	4	0	1	1	1	51	1	14	1	0	0
Idaho	0	1	0	----	----	----	6	23	2	2	0	0
Wyoming	0	1	1	----	16	----	1	12	3	0	0	0
Colorado	3	17	5	16	19	13	15	8	8	3	0	0
New Mexico	1	5	3	----	1	----	0	0	1	0	0	0
Arizona	3	2	2	55	31	36	5	3	3	2	0	0
Utah [3]	0	0	0	----	----	----	2	54	2	0	1	0
Nevada	0	1	----	----	----	----	3	2	----	0	0	----
PACIFIC												
Washington	6	2	2	1	1	----	16	87	9	4	3	0
Oregon	1	3	3	1	5	7	22	30	14	4	3	0
California	19	17	14	12	17	15	92	42	72	22	6	1
Total	425	448	448	905	959	800	1,374	647	668	192	48	27
39 weeks	9,063	9,374	10,350	85,825	84,770	154,152	542,892	470,048	470,048	14,523	2,671	1,602

See footnotes at end of table.

Telegraphic morbidity reports from State health officers for the week ended October 2, 1943, and comparison with corresponding week of 1942 and 5-year median—Con.

Division and State	Poliomyelitis			Scarlet fever			Smallpox			Typhoid and paratyphoid fever [3]		
	Week ended—		Median 1938–42	Week ended—		Median 1938–42	Week ended—		Median 1938–42	Week ended—		Median 1938–42
	Oct. 2, 1943	Oct. 3, 1942		Oct. 2, 1943	Oct. 3, 1942		Oct. 2, 1943	Oct. 3, 1942		Oct. 2, 1943	Oct. 3, 1942	
NEW ENGLAND												
Maine	3	1	1	14	4	4	0	0	0	2	3	0
New Hampshire	0	0	0	0	6	1	0	0	0	0	0	0
Vermont	0	3	0	2	2	4	0	0	0	0	1	0
Massachusetts	31	1	4	173	94	40	0	0	0	7	11	1
Rhode Island	18	0	0	6	3	3	0	0	0	0	0	0
Connecticut	32	3	3	11	25	17	0	0	0	0	1	2
MIDDLE ATLANTIC												
New York	52	20	21	131	112	93	0	0	0	19	12	18
New Jersey	7	9	9	30	32	32	0	0	0	0	2	5
Pennsylvania	8	5	13	87	80	80	0	0	0	13	17	17
EAST NORTH CENTRAL												
Ohio	12	7	7	183	77	93	0	0	0	9	5	12
Indiana	7	3	4	25	35	35	0	0	0	3	1	7
Illinois	118	37	31	87	76	85	0	0	0	1	14	21
Michigan [3]	15	16	26	63	51	62	0	0	1	3	6	4
Wisconsin	19	1	8	88	57	61	0	1	0	4	1	2
WEST NORTH CENTRAL												
Minnesota	9	5	16	32	28	37	1	0	0	0	0	2
Iowa	16	5	5	28	37	26	0	0	0	0	1	1
Missouri	22	3	3	34	32	25	0	0	0	3	7	13
North Dakota	1	1	0	7	3	10	1	0	0	3	0	0
South Dakota	0	0	1	9	5	5	0	0	0	0	0	0
Nebraska	8	15	7	10	14	12	0	0	0	0	0	0
Kansas	32	9	4	57	29	44	0	0	0	0	2	4
SOUTH ATLANTIC												
Delaware	0	2	0	1	3	3	0	0	0	1	1	0
Maryland [3]	3	1	1	18	17	17	0	0	0	3	7	8
District of Columbia	1	0	1	10	14	8	0	0	0	1	0	1
Virginia	8	2	3	46	41	36	0	0	0	8	6	18
West Virginia	4	0	1	72	43	43	0	0	0	15	2	15
North Carolina	0	8	4	111	78	78	0	0	0	1	2	6
South Carolina	1	3	3	12	13	13	0	0	0	6	2	14
Georgia	1	2	1	21	36	26	0	0	0	2	13	13
Florida	0	1	1	5	1	4	0	0	0	1	5	4
EAST SOUTH CENTRAL												
Kentucky	7	3	6	47	29	47	0	0	0	6	5	14
Tennessee	0	7	4	47	75	49	0	0	0	5	14	12
Alabama	2	1	1	17	32	30	0	0	0	1	4	4
Mississippi [3]	1	1	1	6	18	11	0	0	0	2	2	5
WEST SOUTH CENTRAL												
Arkansas	0	7	1	2	4	9	0	0	0	1	8	10
Louisiana	1	2	2	6	6	5	0	0	0	5	4	16
Oklahoma	22	2	2	10	10	13	0	0	0	3	7	7
Texas	26	4	4	22	32	24	2	0	1	12	22	34
MOUNTAIN												
Montana	3	0	0	21	10	10	0	0	0	0	1	1
Idaho	0	0	1	7	10	7	0	0	0	2	0	1
Wyoming	1	5	1	5	2	2	0	0	0	1	0	0
Colorado	17	2	1	14	10	19	0	0	0	4	2	2
New Mexico	3	1	1	5	1	1	0	0	0	7	9	6
Arizona	3	1	0	6	2	2	0	0	0	4	3	3
Utah [3]	18	1	1	16	7	5	0	0	0	1	0	0
Nevada	1	0	------	6	0	------	0	0	------	0	1	------
PACIFIC												
Washington	19	0	0	37	19	19	0	0	0	2	2	4
Oregon	29	0	0	13	3	9	1	0	0	1	0	6
California	98	17	13	96	67	72	0	0	1	6	7	7
Total	679	217	469	1,756	1,385	1,385	5	1	9	168	213	383
39 weeks	9,309	2,835	4,899	104,359	94,716	122,665	630	640	2,020	4,352	5,350	7,441

See footnotes at end of table.

Telegraphic morbidity reports from State health officers for the week ended October 2, 1943 and comparison with corresponding week of 1942 and 5-year median—Con.

Division and State	Whooping cough			Week ended Oct. 2, 1943								
	Week ended—		Median 1938–42	Anthrax	Dysentery			Encephalitis, infectious	Leprosy	Rocky Mt. spotted fever	Tularemia	Typhus fever
	Oct. 2, 1943	Oct. 3, 1942			Amebic	Bacillary	Unspecified					
NEW ENGLAND												
Maine	16	36	27	0	0	0	0	0	0	0	0	0
New Hampshire	1	2	0	0	0	0	0	0	0	0	0	0
Vermont	12	17	15	0	0	0	0	0	0	0	0	0
Massachusetts	82	113	104	0	0	14	0	1	0	0	0	0
Rhode Island	61	26	24	0	0	0	0	0	0	0	0	0
Connecticut	10	38	38	0	0	20	0	0	0	0	0	0
MIDDLE ATLANTIC												
New York	176	329	329	0	2	196	0	6	0	1	0	0
New Jersey	81	133	133	0	0	3	0	1	0	0	0	0
Pennsylvania	136	250	250	1	0	0	0	0	0	0	0	0
EAST NORTH CENTRAL												
Ohio	104	129	184	0	2	2	0	0	0	0	0	0
Indiana	34	30	21	0	0	0	0	0	0	0	0	0
Illinois	145	166	166	0	3	7	0	3	0	1	0	0
Michigan [3]	191	193	243	0	0	14	0	0	0	0	0	0
Wisconsin	220	187	187	0	0	0	0	0	0	0	1	0
WEST NORTH CENTRAL												
Minnesota	52	34	45	0	0	0	0	0	0	0	0	0
Iowa	27	23	16	0	0	0	0	0	0	0	0	0
Missouri	23	5	19	0	0	0	5	0	0	1	1	0
North Dakota	13	22	22	0	0	0	2	0	0	0	1	0
South Dakota	14	0	2	0	0	0	0	0	0	0	0	0
Nebraska	16	7	7	0	0	0	0	0	0	0	0	0
Kansas	28	22	41	0	0	0	0	1	0	0	1	0
SOUTH ATLANTIC												
Delaware	6	0	8	0	0	0	0	0	0	0	0	0
Maryland [3]	64	64	53	0	0	0	9	0	0	0	0	0
District of Columbia	9	6	17	0	0	0	0	0	0	0	0	0
Virginia	59	19	45	0	0	0	158	0	0	0	0	4
West Virginia	6	7	25	0	0	0	0	0	0	0	0	0
North Carolina	105	35	99	0	0	0	0	0	0	0	0	2
South Carolina	39	22	22	0	0	9	0	0	0	0	0	5
Georgia	26	10	10	0	2	5	0	0	0	0	0	44
Florida	21	3	5	0	1	2	0	0	0	0	0	3
EAST SOUTH CENTRAL												
Kentucky	33	26	52	0	0	0	0	0	0	0	0	0
Tennessee	21	29	29	0	0	0	3	0	0	0	0	0
Alabama	25	8	20	0	0	0	0	0	0	0	0	21
Mississippi [3]	----	----	----	0	0	0	0	0	0	0	0	1
WEST SOUTH CENTRAL												
Arkansas	20	3	6	0	0	7	0	0	0	0	0	0
Louisiana	5	3	7	0	1	11	0	0	0	0	0	10
Oklahoma	3	3	7	0	0	0	0	0	0	1	0	0
Texas	123	104	99	0	40	167	0	1	0	0	0	40
MOUNTAIN												
Montana	10	28	7	0	0	0	0	0	0	0	0	0
Idaho	2	1	2	0	0	0	0	0	0	0	0	0
Wyoming	4	11	3	0	0	0	5	0	0	0	0	0
Colorado	32	19	23	0	0	0	0	0	0	0	0	0
New Mexico	1	26	24	0	0	1	0	0	0	0	0	0
Arizona	9	3	12	0	0	0	9	0	0	0	0	0
Utah [3]	24	21	21	0	0	0	0	0	0	0	1	0
Nevada	0	0	----	0	0	2	0	0	0	0	0	0
PACIFIC												
Washington	71	18	33	0	0	0	0	0	0	0	0	0
Oregon	32	6	9	0	0	0	0	0	0	0	0	0
California	141	213	202	0	1	10	0	1	0	0	0	0
Total	2,333	2,450	2,611	1	52	470	191	14	0	4	5	130
39 weeks	147,659	139,386	141,753	49	1,634	12,884	3,228	554	19	414	656	3,076
39 weeks, 1942	----	----	----	63	853	9,633	5,475	423	36	434	721	2,587

[1] New York City only.
[2] Period ended earlier than Saturday
[3] Including paratyphoid fever cases reported separately as follows: Massachusetts, 6; New York, 1; South Carolina, 1; Georgia, 1; Louisiana, 1; Texas, 1; New Mexico, 1; California, 5.

NOTIFIABLE DISEASES, SECOND QUARTER 1943

The figures in the following table are the totals of the monthly morbidity reports received from the State health authorities for April, May, and June 1943, and are preliminary and therefore incomplete. The comparisons made are with similar preliminary reports. Each State health officer has been requested to include in the monthly report for his State all diseases that are required by law or regulation to be reported in the State. The lists of diseases required to be reported are not the same for each State, although the common communicable diseases are notifiable in all the States. Certain diseases, however, may be a health problem in some States but not in others. There are variations among the States also in the degree of completeness of reporting of cases. As compared with the deaths, incomplete case reports are obvious for such diseases as malaria, pellagra, pneumonia, and tuberculosis, while in many States other diseases, such as puerperal septicemia and Vincent's infection, are not reportable.

In spite of these known deficiencies, however, these monthly reports, which are published quarterly and annually in consolidated form, have proved of value in presenting early information regarding the reported incidence of a large group of diseases and in indicating a trend by providing a comparison with similar preliminary figures for prior years. To some extent they also give a picture of the geographic prevalence of certain diseases, as the States are arranged by geographic location.

Leaders are used in the table to indicate that no case of the disease was reported.

Consolidated monthly State morbidity reports for April, May, and June 1943

Division and State	Anthrax	Chickenpox	Diphtheria	Dysentery, amebic	Dysentery, bacillary	Dysentery, undefined	Encephalitis, infectious	German measles	Hookworm disease	Influenza	Malaria	Measles	Meningitis, meningococcus	Mumps	Ophthalmia neonatorum	Pellagra	Pneumonia, all forms	Poliomyelitis
NEW ENGLAND																		
Maine		839	6		1			569		8		836	73	698			114	
New Hampshire		45	1					719		3		392	25	74			23	2
Vermont		447						2,848			1	3,702	7	208			13	1
Massachusetts	2	3,269	19		17		11	20,416			24	19,594	331	2,025	68		[1] 821	6
Rhode Island		239	6				1	1,704		5		906	127	474	1		91	2
Connecticut		1,809	14	2	23		4	10,714		21	3	4,844	122	2,508			746	4
MIDDLE ATLANTIC																		
New York	2	8,673	116	67	210		21	[2] 9,961		[2] 124	19	41,309	895	[2] 2,979	38		6,015	17
New Jersey	3	6,950	50	9	1	2	5	39,054		133	3	25,372	337	8,778	3		1,255	5
Pennsylvania	3	8,338	135	2	4		9	24,970		19	1	21,139	418	6,630	10	3	1,388	9
EAST NORTH CENTRAL																		
Ohio		3,440	134	2	1		14	5,464		156	11	7,305	172	3,223	152	1	871	2
Indiana		1,038	53	6		1		1,870		206	71	5,603	115	1,278		1	386	4
Illinois		3,860	263	6	7	4	[3] 13	7,937		157	18	19,516	259	2,848	109		2,741	4
Michigan		5,946	66	3	17		1	3,825		184	127	37,291	287	3,225	3		1,135	3
Wisconsin		8,232	17				3	31,626		370	7	27,416	71	6,042			[1] 608	5

See footnotes at end of table.

Consolidated monthly State morbidity reports for April, May, and June 1943—Continued

Division and State	Anthrax	Chickenpox	Diphtheria	Dysentery, amebic	Dysentery, bacillary	Dysentery, undefined	Encephalitis, infectious	German measles	Hookworm disease	Influenza	Malaria	Measles	Meningitis, meningococcus	Mumps	Ophthalmia neonatorum	Pellagra	Pneumonia, all forms	Poliomyelitis
WEST NORTH CENTRAL																		
Minnesota		2,280	55	24	2	2				21		4,387	37				155	1
Iowa		662	34				1	2,332		10	3	2,632	27	1,045			102	
Missouri		578	22	11		2	2			32	38	4,038	250	846	1		360	5
North Dakota		241	6		1		1			162	1	1,061	6	460			445	
South Dakota		107	3				1					1,655	6	63			24	
Nebraska		433	13							66		2,259	11	1,141			56	1
Kansas	1	1,040	34	4	2		8	2,503		33	2	4,608	53	1,791		1	282	12
SOUTH ATLANTIC																		
Delaware		158	1									1,165	27	62			5	
Maryland		1,565	41		5	1	1	2,823		53	2	2,512	181	976			709	1
District of Columbia		351	1	4	3					10	30	1,160	56	254		1	276	
Virginia		1,343	40	2		607	1			2,358	28	4,812	255	2,266		10	1,222	5
West Virginia		449	34				1			203		1,073	53	317		1	54	4
North Carolina		1,293	70	2	5					110	65	3,032	200			5	260	3
South Carolina		604	112	1	134		7	1,360	171	4,180	2,372	1,804	114	1,538	6	200	1,620	2
Georgia		373	36	9	120	25	2		775	423	131	2,576	65	727		22	458	2
Florida		1,177	31	28	8		3	885	1,250	177	25	853	104	1,257	6	18	429	3
EAST SOUTH CENTRAL																		
Kentucky		404	41	1	29		2	814		93	12	2,609	142	523		1	151	10
Tennessee		396	38			36	3	834		478	57	3,704	150	935	6	22	694	2
Alabama	2	349	45	3			4	661		1,381	558	2,129	95	697		23	984	7
Mississippi		1,887	58	335	4,907				847	6,094	7,655	3,239	147	3,165	33	846	2,687	5
WEST SOUTH CENTRAL																		
Arkansas		581	50	14	119			755		242	276	1,416	60	278		13	612	13
Louisiana	1	145	37	13	60			182	72	62	46	936	59	453		2	523	8
Oklahoma		257	40	3	9		1		39	495	510	1,125	40	285	2	18	270	26
Texas	2	3,811	291	334	2,417		13			8,365	2,281	7,831	178	3,130	19	283	3,399	110
MOUNTAIN																		
Montana		453	10		3	1	2			121		2,105	5	911			34	
Idaho		86	47				1	582		17	1	735	72	1,192			33	1
Wyoming		158	1	2			1	56		193	1	1,657	11	676			33	1
Colorado		1,394	106	3	18		2			410	9	6,203	38	1,722			483	5
New Mexico		149	7		5	4	(6)	63		35	1	202	6	87		2	301	4

See footnotes at end of table.

Division and State	Puerperal septicemia	Rabies in animals	Rabies in man	Rocky Mountain spotted fever	Scarlet fever	Septic sore throat	Smallpox	Tetanus	Trachoma	Trichinosis	Tuberculosis, all forms	Tuberculosis, respiratory	Tularemia	Typhoid and paratyphoid fever	Paratyphoid fever	Typhus fever	Undulant fever	Vincent's infection	Whooping cough
Arizona		433	16	5	358		201		749	4	514	23	556	2	2	414	30		
Utah		1,875	3	1	2	1	1,773		106	32	2,126	46	622			306	7		
Nevada		53	1	1	1						208	7	108			29			
PACIFIC																			
Washington		2,412	76	3			13	3,538	76		5,579	93	2,326			299	13		
Oregon		551	21	4					322	10	3,140	84	1,190			357	2		
California		15,632	221	31	135		15	18,965	907	370	13,873	467	10,590			[1] 1,233	332		
1943	16	96,805	2,522	935	8,354	1,045	168	200,004	3,154	29,370	14,806	314,283	6,407	83,139	459	1,475	35,506	680	
1942	22	96,427	2,338	726	7,633	3,309	134	76,053	4,769	24,028	15,816	265,669	1,076	107,127	437	1,971	28,517	272	
Median, 1938–42	18	81,547	2,856	796	7,495	357	140		6,683	24,028	17,273	265,669	559	53,395	437	2,817	31,430	368	
Alaska		45						106		755		129	7	89			88		
Hawaii Territory		770	25	6	16		1	114	15	1,495	23	44	9	1,426			[1] 52	59	
Panama Canal Zone [6]		63	30	13	4						806	39	3	297					
NEW ENGLAND																			
Maine					197						157	137		7			2	7	501
New Hampshire					95	6					96			4			1		61
Vermont					130			1			29						13	6	196
Massachusetts					5,974	43		3	4	1	970	906		64	52		13		1,606
Rhode Island		1			367	35		1			222	215		3					458
Connecticut				1	1,183	54		2		4	401	382		7	5		17		458
MIDDLE ATLANTIC																			
New York		48		2	6,035	291		12		35	3,530	3,351	2	75	20	3	59		3,543
New Jersey				2	1,503	44	1	5	2	8	1,140			15	4		17		2,133
Pennsylvania			1	2	3,290					1	1,557		1	48		1	21		3,203
EAST NORTH CENTRAL																			
Ohio				3	2,570	53	76	5	10		1,326	1,299	1	37	4		19	17	1,942
Indiana				2	919	2	17	2			980	785		17		1	22	295	898
Illinois		161	2	2	1,901	126	5	8	30	1	2,372	2,174	16	24	5		102	55	1,712
Michigan		1			1,413	143	9	5	2		1,719			35	7		40	54	3,388
Wisconsin					4,086	5	2				639		3	4			65		3,168

See footnotes at end of table.

Consolidated monthly State morbidity reports for April, May, and June 1943—Continued

Division and State	Puerperal septicemia	Rabies in animals	Rabies in man	Rocky Mountain spotted fever	Scarlet fever	Septic sore throat	Smallpox	Tetanus	Trachoma	Trichinosis	Tuberculosis, all forms	Tuberculosis, respiratory	Tularemia	Typhoid and paratyphoid fever	Paratyphoid fever	Typhus fever	Undulant fever	Vincent's infection	Whooping cough
WEST NORTH CENTRAL																			
Minnesota				1	657	1,205		2	1		470		4	5			65		1,072
Iowa		5		3	480	29	11				159	159		7			100		513
Missouri			1	2	1,109		4		125		659		4	22	4		15	13	396
North Dakota					49	4	1		9		72	29	2	2			5	25	87
South Dakota				3	135	11	5	2	3		64			2			1		64
Nebraska					361		4				41			1					170
Kansas		3			497	17	4	1	1		188	123	4	13	1		44	38	1,127
SOUTH ATLANTIC																			
Delaware				5	48						22	22		4			1		45
Maryland		3		23	1,172	50		6	1	1	1,050	688		18			4	21	1,508
District of Columbia		15			178						641	617		25	15				312
Virginia				9	422	171					1,271	1,271	5	34	3	1	8		1,708
West Virginia				4	250	13	2				527			32	1				866
North Carolina				6	294	14	5				533	519	4	17		21	1		2,919
South Carolina		48			54	2	1	3			159		7	14	4	8	5		841
Georgia					120	65	1	10		5	573	571	26	63	20	142	31	60	758
Florida		22			70	6	1	5			370		1	36	9	80	17	62	393
EAST SOUTH CENTRAL																			
Kentucky					383	17	6		8		575	572	1	29	1		6		523
Tennessee	4		1	5	359	47	6	3	3		956		19	25	3	2	17	80	897
Alabama		38			148		5	12			792		3	20	1	80	21		872
Mississippi	45			2	128		6		18		450	437	27	35		22	15		4,800
WEST SOUTH CENTRAL																			
Arkansas		56			98	92	14		100		270	241	50	30	1	2	4		502
Louisiana		52	2		75	13	1	5			773	770	5	54	5	29	11		113
Oklahoma	1		1	2	190	59	2		31		510		7	8		2	6		485
Texas			1	1	686	104	35		18		2,062		18	96	13	213	91		7,672

MOUNTAIN																		
Montana				23	109	17	1				113		36	2				13	313
Idaho				8	828	1	2				24	7		4					38
Wyoming				22	479	7			13		11		5	2			1	2	34
Colorado		3		9	608	5	5				449		5	22	2	1	10		314
New Mexico	5	19		3	69	4			16		185	162	2	13			7		171
Arizona					137	67			118		367			4	1		5		274
Utah				9	300	2	1	2	1		36	32	13	8			2		868
Nevada					15	9	1		6		18		1	1			2	32	21
PACIFIC																			
Washington				2	300	44	2		6		619	597	1	7		[7]1	13	56	523
Oregon				9	236	9	7	1	6		161		3	9			5	37	319
California		253	1	3	2,144		2	16	39	4	2,849	2,738	4	52	23	4	54		5,783
1943	55	728	10	168	43,121	2,886	245	112	571	60	33,157	18,804	280	1,056	204	613	958	873	60,568
1942	40	591	5	191	33,871	1,470	262	110	699	95	26,800	13,502	245	1,317		464	826	251	51,886
Median, 1938–42	90	866	9	192	42,632	2,642	846	110	699	95	28,024	14,944	227	1,677		353	968	484	51,886
Alaska					19						70	69		1					24
Hawaii Territory					20	3		5	5					2	1	18			718
Panama Canal Zone [6]					2									2	2				

[1] Lobar pneumonia only.
[2] New York City only.
[3] 17 cases of post-infectious encephalitis were also reported.
[4] 1 case of unspecified encephalitis was also reported.
[5] 2 cases of unspecified encephalitis were reported.
[6] Including the cities of Panama and Colon.
[7] Epidemic typhus fever. Imported case.

Actinomycosis: Connecticut, 1; Ohio, 2; Minnesota, 10; South Dakota, 1; Nevada, 1.

American Q fever: Montana, 1.

Botulism: Washington, 2; California, 1.

Coccidioidomycosis: Arizona, 57; California, 6.

Conjunctivitis: Massachusetts, 118 (suppurative); Rhode Island, 2 (kerato); Connecticut, 34 (infectious); Illinois, 15 (kerato); Michigan, 129 (kerato); Missouri, 2; North Dakota, 6 (includes 4 kerato); South Dakota, 6; Kansas, 1 (kerato); Maryland, 15; Georgia, 2; Florida, 5; Tennessee, 8 (kerato); Oklahoma, 1; Idaho, 6; Wyoming, 1 (kerato); New Mexico, 2; Utah, 1 (kerato); California, 10 (includes ophthalmia neonatorum); Hawaii Territory, 5.

Dengue: South Carolina, 2; Mississippi, 4; Texas, 5; California, 1; Hawaii Territory, 1.

Diarrhea and enteritis: New Jersey, 6 (diarrhea of newborn); Ohio, 46; Michigan, 34 (diarrhea of newborn); Maryland, 15 (diarrhea only); South Carolina, 3,510 (diarrhea only); Florida, 9 (infant diarrhea); Wyoming, 11 (diarrhea only); New Mexico, 23; Nevada, 41 (infant diarrhea); California, 81 (diarrhea of newborn).

Dog bite: Illinois, 4,725 (all animals); Michigan, 2,603.

Food poisoning: Ohio, 59; Illinois, 13; Louisiana, 2; New Mexico, 4; Arizona, 6; Nevada, 2; Washington, 133; California, 545.

Granuloma: Ohio, 2 (unspecified); Tennessee, 16 (inguinale); Mississippi, 191 (inguinale) Louisiana, 31 (inguinale); Arizona, 6 (inguinale); Washington, 7 (inguinale).

Impetigo contagiosa: Ohio, 54; Illinois, 10; Michigan, 227; Kansas, 14; Maryland, 3; Florida, 17; Oklahoma, 1; Washington, 2; Oregon, 94; Hawaii Territory, 78.

Jaundice: Minnesota, 2; Florida, 7; California, 28.

Leprosy: Massachusetts, 1; Pennsylvania, 1; Minnesota, 1; Florida, 1; Louisiana, 1; California, 4; Hawaii Territory, 11; Panama Canal Zone, 2.

Lymphocytic choriomeningitis: Massachusetts, 1.

Lymphogranuloma venereum: Missouri, 2; Tennessee, 28; Louisiana, 61; Arizona, 4.

Plague (human): Hawaii Territory, 2.

Psittacosis: Pennsylvania, 1.

Rat bite fever: Oklahoma, 1.

Relapsing fever: Texas, 12; Nevada, 1; California, 2.

Rheumatic fever: Illinois, 86; Michigan, 17; Georgia, 27; Wyoming, 2; Arizona, 3; Utah, 7; California, 125.

Scabies: Michigan, 117; Kansas, 26; Maryland, 1; Florida, 60; Oklahoma, 16; Idaho, 1; Oregon, 131.

Silicosis: Ohio, 2; New Mexico, 1.

Weil's disease: Massachusetts, 1; Utah, 1; Hawaii Territory, 22.

WEEKLY REPORTS FROM CITIES

City reports for week ended September 18, 1943

This table lists the reports from 87 cities of more than 10,000 population distributed throughout the United States, and represents a cross section of the current urban incidence of the diseases included in the table.

	Diphtheria cases	Encephalitis, infectious, cases	Influenza		Measles cases	Meningitis, meningococcus, cases	Pneumonia deaths	Poliomyelitis cases	Scarlet fever cases	Smallpox cases	Typhoid and paratyphoid fever cases	Whooping cough cases
			Cases	Deaths								
NEW ENGLAND												
Maine:												
Portland	0	0	.....	0	2	2	0	1	2	0	0	6
New Hampshire:												
Concord	0	0	.....	0	0	0	1	0	0	0	0	0
Massachusetts:												
Boston	0	0	.....	0	6	5	9	10	14	0	1	24
Fall River	0	0	.....	0	0	0	0	1	1	0	0	5
Springfield	0	0	.....	0	3	0	0	0	6	0	0	2
Worcester	0	0	.....	0	1	0	4	0	15	0	0	7
Rhode Island:												
Providence	0	0	.....	0	17	1	1	7	5	0	0	141
Connecticut:												
Bridgeport	0	0	.....	0	0	1	0	4	1	0	0	0
Hartford	1	0	.....	0	0	1	0	1	2	0	0	4
New Haven	0	0	.....	0	1	1	1	3	0	0	0	4
MIDDLE ATLANTIC												
New York:												
Buffalo	0	0	.....	0	2	1	5	6	6	0	1	6
New York	4	0	.....	0	43	6	33	37	26	0	3	87
Rochester	0	0	.....	0	0	0	3	0	5	0	0	9
Syracuse	0	0	.....	0	2	0	3	0	0	0	0	20
New Jersey:												
Camden	1	0	.....	0	0	0	1	0	0	0	0	1
Newark	0	0	.....	0	0	2	2	2	3	0	1	31
Trenton	0	0	1	0	0	1	0	0	0	0	1	1
Pennsylvania:												
Philadelphia	3	1	.....	0	4	7	13	5	8	0	1	55
Pittsburgh	0	0	.....	0	4	1	3	0	11	0	0	20
Reading	0	0	.....	0	1	0	1	0	0	0	0	1
EAST NORTH CENTRAL												
Ohio:												
Cincinnati	0	0	.....	0	0	0	2	1	12	0	0	12
Cleveland	1	0	.....	0	0	1	6	2	27	0	1	33
Columbus	0	0	.....	0	0	0	1	1	4	0	0	6
Indiana:												
Fort Wayne	0	0	.....	0	0	0	0	3	1	0	0	0
Indianapolis	1	0	.....	0	0	0	7	0	3	0	2	15
South Bend	0	0	.....	0	1	0	0	0	0	0	0	0
Terre Haute	0	0	.....	0	0	0	0	0	0	0	0	0
Illinois:												
Chicago	3	0	1	0	2	4	15	122	17	0	3	64
Springfield	0	0	.....	0	0	1	0	0	0	0	0	0
Michigan:												
Detroit	2	0	.....	0	3	4	9	6	14	0	0	57
Flint	1	0	.....	0	0	0	0	0	0	0	0	0
Grand Rapids	0	0	.....	1	4	0	1	1	0	0	0	5
Wisconsin:												
Kenosha	0	0	.....	0	1	0	0	0	1	0	0	6
Milwaukee	0	1	1	1	4	0	4	5	7	0	1	85
Racine	0	0	.....	0	2	0	0	0	1	0	0	6
Superior	0	0	.....	0	12	0	0	0	0	1	0	0
WEST NORTH CENTRAL												
Minnesota:												
Duluth	0	0	.....	0	0	0	1	0	2	0	0	8
Minneapolis	0	0	.....	0	1	0	1	5	5	0	0	6
St. Paul	6	0	.....	0	5	0	1	2	2	0	0	22
Missouri:												
Kansas City	0	0	.....	0	1	0	1	1	3	0	0	6
St. Louis	1	1	.....	0	0	2	7	2	6	0	3	8
North Dakota:												
Fargo	0	0	.....	0	4	0	0	0	0	0	0	0
Nebraska:												
Omaha	1	0	.....	0	0	0	3	6	5	0	0	0

City reports for week ended September 18, 1943—Continued

	Diphtheria cases	Encephalitis, infectious, cases	Influenza		Measles cases	Meningitis, meningococcus, cases	Pneumonia deaths	Poliomyelitis cases	Scarlet fever cases	Smallpox cases	Typhoid and paratyphoid fever cases	Whooping cough cases
			Cases	Deaths								
WEST NORTH CENTRAL—Continued												
Kansas:												
Topeka	0	0	------	0	1	0	0	1	2	0	2	3
Wichita	0	0	------	0	0	1	3	2	1	0	0	2
SOUTH ATLANTIC												
Delaware:												
Wilmington	0	0	------	0	1	0	0	0	0	0	0	0
Maryland:												
Baltimore	0	0	------	0	1	1	7	1	3	0	1	68
Cumberland	0	0	------	0	0	0	0	0	0	0	0	0
Frederick	0	0	------	0	0	0	1	0	0	0	0	0
District of Columbia:												
Washington	0	0	------	0	1	1	6	2	4	0	1	14
Virginia:												
Lynchburg	0	0	------	0	12	0	0	0	2	0	0	4
Richmond	0	0	------	1	0	1	2	0	4	0	0	0
Roanoke	1	0	------	0	0	0	0	0	1	0	0	0
West Virginia:												
Charleston	0	0	------	0	0	0	0	0	2	0	0	0
Wheeling	0	0	------	0	0	0	1	0	0	0	0	7
North Carolina:												
Wilmington	2	0	------	0	0	0	0	0	0	0	0	0
Winston-Salem	0	0	------	0	0	0	1	0	3	0	0	4
South Carolina:												
Charleston	0	1	3	0	0	1	0	0	0	0	0	0
Georgia:												
Atlanta	0	0	13	0	0	0	2	1	9	0	2	0
Brunswick	0	0	------	0	0	0	0	0	0	0	0	0
Savannah	0	0	------	0	0	0	1	2	1	0	0	1
Florida:												
Tampa	0	0	------	0	0	0	1	0	0	0	0	0
EAST SOUTH CENTRAL												
Tennessee:												
Memphis	0	0	------	2	0	0	2	0	2	0	0	10
Nashville	1	0	------	1	1	0	1	0	2	0	0	4
Alabama:												
Birmingham	0	0	1	0	1	0	1	0	4	0	0	1
Mobile	0	0	------	1	0	2	3	0	1	0	0	0
WEST SOUTH CENTRAL												
Arkansas:												
Little Rock	0	0	------	0	0	0	2	0	0	0	0	0
Louisiana:												
New Orleans	2	0	6	1	0	1	6	4	3	0	3	1
Shreveport	0	0	------	0	0	0	1	0	0	0	0	0
Texas:												
Dallas	1	0	------	0	0	0	1	4	2	0	1	5
Galveston	0	0	------	0	0	0	1	1	0	0	0	0
Houston	0	0	------	1	0	0	2	2	0	0	0	5
San Antonio	0	0	1	0	0	0	3	1	0	0	0	0
MOUNTAIN												
Montana:												
Billings	0	0	------	0	0	0	1	2	0	0	0	4
Great Falls	0	0	------	0	5	0	0	1	0	0	0	5
Helena	0	0	------	0	0	0	0	0	1	0	0	0
Missoula	0	0	------	0	0	0	0	0	0	0	0	0
Idaho:												
Boise	0	0	------	0	0	0	0	0	1	0	0	1
Colorado:												
Denver	2	0	2	0	0	0	5	5	2	0	0	25
Pueblo	0	0	------	0	0	0	0	15	1	0	0	5
Utah:												
Salt Lake City	0	0	------	0	4	0	2	13	0	0	1	15

City reports for week ended September 18, 1943—Continued

	Diphtheria cases	Encephalitis, infectious, cases	Influenza		Measles cases	Meningitis, meningococcus, cases	Pneumonia deaths	Poliomyelitis cases	Scarlet fever cases	Smallpox cases	Typhoid and paratyphoid fever cases	Whooping cough cases
			Cases	Deaths								
PACIFIC												
Washington:												
Seattle	3	0	------	0	7	2	1	2	3	0	0	5
Spokane	0	0	------	0	2	0	1	1	4	0	0	10
Tacoma	0	0	------	0	1	0	0	3	2	0	0	2
California:												
Los Angeles	7	0	3	2	3	1	4	26	10	0	0	26
Sacramento	0	1	------	0	0	0	3	5	1	0	0	0
San Francisco	2	0	1	0	4	0	3	6	7	0	0	18
Total	46	5	33	11	170	52	207	334	293	1	29	1,005
Corresponding week, 1942	51	1	45	12	118	24	242	68	281	0	24	1,214
Average, 1938–42	64	------	43	[1] 9	[2] 132	------	[1] 216	------	295	1	47	1,117

Dysentery, amebic.—Cases: New Haven, 1; New York, 1; St. Louis, 1.
Dysentery, bacillary.—Cases: Providence, 1; Buffalo, 19; New Haven, 4; New York, 5; Rochester, 1; Chicago, 1; Detroit, 5; St. Louis, 1; Baltimore, 5; Charleston, S. C., 4; Atlanta, 1; Nashville, 1; Los Angeles, 7.
Dysentery, unspecified.—Cases: Baltimore, 8; Richmond, 4; San Antonio, 1; Denver, 1.
Rocky Mountain spotted fever.—Cases: New York, 1.
Tularemia.—Cases: Richmond, 1.
Typhus fever.—Cases: New York, 1; Atlanta, 4; Savannah, 3; Memphis, 2; Nashville, 1; Birmingham, 2; New Orleans, 5; Shreveport, 4; Dallas, 3.

[1] 3-year average, 1940–42.
[2] 5-year median.

Rates (annual basis) per 100,000 population, by geographic groups, for the 87 cities in the preceding table (estimated population, 1942, 34,643,500)

	Diphtheria case rates	Encephalitis, infectious, case rates	Influenza		Measles case rates	Meningitis, meningococcus, case rates	Pneumonia death rates	Poliomyelitis case rates	Scarlet fever case rates	Smallpox case rates	Typhoid and paratyphoid fever case rates	Whooping cough case rates
			Case rates	Death rates								
New England	2.5	0.0	0.0	0.0	74.9	27.5	39.9	67.4	114.8	0.0	2.5	482
Middle Atlantic	3.6	0.4	0.4	0.0	25.0	8.0	28.5	22.3	26.3	0.0	3.1	103
East North Central	4.7	0.6	1.2	1.2	16.9	5.8	26.3	82.3	50.8	0.6	4.1	169
West North Central	16.0	2.0	0.0	0.0	24.1	6.0	34.1	38.1	52.1	0.0	10.0	104
South Atlantic	5.1	1.7	27.4	1.7	25.7	6.8	37.7	10.3	49.7	0.0	6.8	168
East South Central	5.9	0.0	5.9	23.8	11.9	11.9	41.6	0.0	53.5	0.0	0.0	89
West South Central	8.8	0.0	20.5	5.9	0.0	2.9	46.9	35.2	14.7	0.0	11.7	32
Mountain	16.1	0.0	16.1	0.0	72.4	0.0	64.3	289.4	40.2	0.0	8.0	442
Pacific	21.0	1.7	7.0	3.5	29.7	5.2	21.0	75.2	47.2	0.0	0.0	107
Total	6.9	0.8	5.0	1.7	25.6	7.8	31.2	50.3	44.1	0.2	4.4	151

PLAGUE INFECTION IN CALIFORNIA

Plague infection has been reported proved in tissue and pools of fleas from rodents collected in California on the dates given as follows:

Eldorado County: September 1, tissue from 1 ground squirrel, *C. beecheyi*, taken at Tallac, Lake Tahoe.

Inyo County: July 22, 51 fleas from 38 ground squirrels, *C. beldingi*, taken at South Lake Resort, 14 miles west of Big Pine.

Mono County: July 31, 86 fleas from 43 golden mantled ground squirrels taken from the premises of Crestview Lodge, 1 mile east and 4 miles south of June Lake, and 40 fleas from 21 golden mantled ground squirrels taken at a ranch 5 miles east and 2 miles south of June Lake; August 12, 73 fleas from 21 chipmunks taken from the premises of June Lake Lodge, at June Lake.

Monterey County: July 15, 200 fleas from 16 ground squirrels, *C. beecheyi*, taken 10 miles south and 14 miles east of Monterey.

TERRITORIES AND POSSESSIONS

Hawaii Territory

Honolulu—Dengue fever.—Information dated September 27, 1943, states that a total of 283 cases of dengue fever, with 1 death, has occurred in Honolulu to date.

Plague (rodent).—A mouse found on August 23, 1943, in the Honokaa area, Hamakua District, Island of Hawaii, T. H., has been proved positive for plague.

FOREIGN REPORTS

BRAZIL

Rio Grande do Sul State—Poliomyelitis.—A report dated September 14, 1943, states that a mild epidemic of poliomyelitis has occurred in Rio Grande do Sul State, Brazil, particularly in the frontier zone adjacent to Uruguay. Forty-eight cases have been officially reported, but it is believed that many cases are not reported. The disease is said to be of a mild type, only one death from poliomyelitis being reported to date.

CANADA

Provinces—Communicable diseases—Week ended September 4, 1943.—During the week ended September 4, 1943, cases of certain communicable diseases were reported by the Dominion Bureau of Statistics of Canada as follows:

Disease	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Total
Chickenpox		1	1	57	24	3	12	4	26	128
Diphtheria		10	3	13	1	2		3		32
Dysentery (amebic)						1				1
Dysentery (bacillary)				11			1			12
Encephalitis (infectious)							4			4
German measles				1	6		2	5	2	16
Influenza					19	1	1		4	25
Measles		2	1	11	53	34	6	38	21	166
Meningitis, meningococcus					1				1	2
Mumps	1			5	45	19	2	16	12	100
Poliomyelitis			5	9	3	3	3		2	25
Scarlet fever	1	5	3	34	35	13	14	21	9	135
Tuberculosis	1	9	7	137	52	24			19	249
Typhoid and paratyphoid fever			2	23	1		1	1		28
Undulant fever				8						8
Whooping cough		6		126	163	10	77	34	21	437

SWEDEN

Notifiable diseases—July 1943.—During the month of July 1943, cases of certain notifiable diseases were reported in Sweden as follows:

Disease	Cases	Disease	Cases
Cerebrospinal meningitis	3	Poliomyelitis	58
Diphtheria	196	Scarlet fever	2,150
Dysentery	202	Syphilis	80
Gonorrhea	1,967	Typhoid fever	9
Hepatitis, epidemic	260	Undulant fever	3
Paratyphoid fever	31	Weil's disease	8

REPORTS OF CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER RECEIVED DURING THE CURRENT WEEK

NOTE.—Except in cases of unusual prevalence, only those places are included which had not previously reported any of the above-mentioned diseases, except yellow fever, during the current year. All reports of yellow fever are published currently.

A cumulative table showing the reported prevalence of these diseases for the year to date is published in the PUBLIC HEALTH REPORTS for the last Friday in each month.

(Few reports are available from the invaded countries of Europe and other nations in war zones.)

Plague

Indochina—Cochinchina.—For the period August 11–20, 1943, one fatal case of plague was reported in Cochinchina, Indochina.

Smallpox

Algeria.—For the period August 11–20, 1943, 17 cases of smallpox were reported in Algeria.

Guinea (French).—For the period August 11–20, 1943, 11 cases of smallpox were reported in French Guinea.

Indochina.—For the period August 11–20, 1943, 53 cases of smallpox were reported in Indochina.

Sudan (French).—For the period August 11–20, 1943, 89 cases of smallpox, with 32 deaths, were reported in French Sudan.

Typhus Fever

Algeria.—For the period August 11–20, 1943, 57 cases of typhus fever were reported in Algeria.

Germany.—For the period January 1 to April 30, 1943, 973 cases of typhus fever were reported in Germany.

Rumania.—For the period September 8–15, 1943, 23 cases of typhus fever were reported in Rumania.

Slovakia.—During the week ended September 4, 1943, nine cases of typhus fever were reported in Slovakia.

Spain.—During the week ended July 31, 1943, three cases of typhus fever were reported in Spain.

COURT DECISION ON PUBLIC HEALTH

City ordinance regarding maintenance of clean and habitable premises upheld.—(Maryland Court of Appeals; *Petrushansky* v. *State*, 32 A.2d 696; decided June 24, 1943.) A health ordinance of the city of Baltimore (No. 384, approved March 6, 1941) added to the city code eight new sections relating to the cleanliness and fitness for human habitation of dwellings. Briefly stated, the ordinance provided that every dwelling should be kept clean and free from any accumulation of dirt, filth, rubbish, garbage or similar matter, and vermin or rodent infestation; that no person should wilfully or maliciously deposit any material in any plumbing fixture which might result in the obstruction of a sanitary sewer; that every dwelling should be maintained in good repair and fit for human habitation; that the commissioner of health could order conditions found by him to be dangerous or detrimental to life or health to be remedied; and that the commissioner of health could order the vacation of dwellings found by him to be unfit for human habitation or dangerous to life or health. There were also other provisions having reference to the sending and posting of notices and orders by the health commissioner and the correction of unhealthful conditions by him through his own agents.

The appellant was charged with violating the ordinance by failing to abate a nuisance on certain premises owned and possessed by him after notice from the city health commissioner. On appeal to the Maryland Court of Appeals from his conviction in the lower court the appellant claimed that the ordinance was invalid on a number of grounds. His objections, which were rejected by the appellate court, were as follows: The ordinance was too vague and indefinite to be a valid criminal enactment; the ordinance was unreasonable and oppressive and beyond the charter powers of the city because it imposed liability upon owners out of possession and unreasonable burdens upon fiduciaries or agents; the ordinance unlawfully delegated to the health commissioner an arbitrary discretion whether or not to enforce it; no definite standards were defined in the ordinance for the health commissioner's guidance as to the conditions under which he was to act; the ordinance granted the health commissioner arbitrary discretion as to the corrective action to be taken; no adequate notice was provided by the ordinance; no review of an order of the health commissioner was permitted to test its validity or propriety; and the title of the ordinance was misleading.

The judgment appealed from was affirmed.

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